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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,306	03/21/2001	Osamu Kasono	040894-5644	1542
9629	7590	09/08/2004	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			CHU, KIM KWOK	
			ART UNIT	PAPER NUMBER
			2653	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/813,306	KASONO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kim-Kwok CHU	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 6/28/2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**Claim Rejections - 35 USC § 103**

1. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

2. Claims 2-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Rosmalen et al. (U.S. Patent 6, 130,418) in view of McVay et al. (U.S. Patent 4,402,607).

Van Rosmalen teaches an optical head apparatus very similar to the instant invention. For example, Van Rosmalen teaches the following:

(a) as in claim 3, the optical head is in an optical path of a light beam between an objective lens 15 and an information recording medium 1 (Fig. 1);

(b) as in claim 3, an immersion lens 17 positioned at a height with respect to a surface of the information recording medium (Fig. 1; column 7, 38-54);

(c) as in claim 3, a detector 65 that measures a height of a foreign material to a surface of the information recording medium 1 (Fig. 1; detector 65 measures the recording medium's

surface in order to maintain a proper height; foreign material such as dust molecules, and surface unevenness always exist in the air gap under detection by detector 65; column 2, lines 27-34, 38-48);

(d) as in claim 3, a controller 83 for outputting a control signal corresponding to the height of the foreign material if the height of the foreign material is higher than the floating height of the immersion lens (Fig. 1; maintaining proper distance; column 2, lines 27-34, 38-48);

(e) as in claim 3, a movement unit 55a-55c that moves the immersion lens 17 to a position higher than the height of the foreign material, the movement unit moving the immersion lens by a distance corresponding to the control signal (Fig. 1; column 7, lines 13-17, 47-60);

(f) as in claim 2, the movement unit includes a magnetic field generator 55a-55c for generating a magnetic field with an intensity corresponding to the control signal (Fig. 1);

(g) as in claim 2, a magnet 53 integrally provided with the immersion lens 17 (Fig. 1; magnet 53 is joined with immersion lens 17);

(h) as in claim 2, said controller 83 outputs the control signal for the magnetic field generator to generate a magnetic force for moving the immersion lens 17 to the position higher than the height of the foreign material in accordance with the

detection result of said detector (Fig. 1; column 2, lines, 38-48);

(i) as in claim 4, the detector 65 is arranged at an upstream position of the immersion lens 17 in a rotational direction of the information recording medium (Fig. 1);

(j) as in claim 5, the detector 65 is arranged in a same radial position as the immersion lens (Fig. 1; detector 65 is located in a direction of the radius of the immersion lens 17);

(k) as in claim 6, an illumination light source 71 that illuminates an incident light beam toward the surface of the information processing medium 1 (Fig. 1);

(l) as in claim 6, the illumination light source 71 is oriented in a manner such that the incident light beam is reflected on the surface of the information recording medium in a first direction when the information recording medium is free from foreign material, and, if a foreign material is disposed on the surface of the information recording medium, the incident light beam is scattered by the foreign material in a second direction toward the detector (Fig. 1; inherent property because a foreign material such as a protrusion on the medium surface 1 scatters an irradiated light beam in different directions);

(m) as in claim 7, the detector 65 generates a light detection signal proportional to an amount of incident light that is scattered by the foreign material (Fig. 1; inherent property

of the detector 65 because it detects the variation of light intensity which includes any scattered light as long as the scattered light is reflected back to the lens 59a); and

(n) as in claim 8, a delay circuit that delays the control signal by a predetermined time (Fig. 1; the controller 83 inherently includes a delay circuit such as registers and processor unit which delay a control unit along the input to output operation).

However, Van Rosmalen does not teach the following:

(a) as in claim 3, detecting the intensity of a scattered light in proportion to a height of the foreign material.

McVay teaches a dust particle detection system for detecting the intensity of a scattered light in proportion to a height of the foreign material (Fig. 3; column 3, lines 18-27).

Foreign materials such as dust and dirt will scratch a near-field lens. To avoid a solid immersion lens collision with foreign materials, it would have been obvious to one of ordinary skill in the art at the time of the invention to control the floating height of Van Rosmalen's solid immersion lens with McVay's dust scattering reflected ray detection method, because the detected scattering ray indicates the size of the foreign object so that the controller moves the immersion lens to a higher position.

**Conclusion**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hayano et al. (5,436,464) is pertinent because Hayano teaches a method for detecting dust particles with scattered light.

Mast et al. (3,767,306) is pertinent because Mast teaches a method for detecting dust particles.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.



11. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C.  
20231 Or faxed to:

(703) 872-9306 (for formal communications intended for  
entry. Or:

(703) 746-6909, (for informal or draft communications,  
please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park  
II, 2021 Crystal Drive, Arlington. VA., Sixth Floor  
(Receptionist).

Any inquiry of a general nature or relating to the status of  
this application should be directed to the Group receptionist  
whose telephone number is (703) 305-4700.

Any inquiry concerning this communication or earlier  
communications from the examiner should be directed to Kim CHU  
whose telephone number is (703) 305-3032 between 9:30 am to 6:00  
pm, Monday to Friday.

*Kz 8/23/04*

Kim-Kwok CHU  
Examiner AU2653  
August 23, 2004

(703) 305-3032

*William Korzuch*  
WILLIAM KORZUCH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600